Primary Teachers' Conceptions of Giftedness

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This article focuses on the first phase of a recent National Research Center on Giftedness and Talented (NRC/GT) project, which used survey research to target a disproportionate nationally stratified random sample of primary grade teachers about their beliefs and practices related to talent development in young children and their responses to case studies describing four different types of students—one easily identified as gifted from a traditional paradigm; the others manifested talents masked by some other factor—poverty, language status, or concurrent social/emotional needs. The mixed-method survey design facilitated triangulation of findings to better understand the contextual factors that influence primary grade teachers' perceptions and behaviors. Findings indicate that primary grade teachers continue to hold traditional conceptions of talent that shapes how they view cultural minority students, nonnative English speakers, and children with other exceptionalities. These beliefs influence the types of academic, social, and programmatic interventions they believe diverse primary grade learners need, often seeing the deficits before identifying the talents.

The need to serve students from diverse cultural and socioeconomic backgrounds is fundamental to the purpose of gifted education, which seeks alignment with the dual educational goals of equity and excellence. An assumption of the field holds that gifted potential is distributed across cultural and economic subdivisions of society, and gifted education initiatives are valued as a means to meet and nurture the gifts of diverse learners (Clark, 1997; Eby & Smutny, 1990; Frazier, Garcia, & Passow, 1995). However, the underrepresentation of poor and cultural minority students has become a pivotal concern for researchers and practitioners in the field of gifted education (Ford & Harris, 1999; Ford, Harris, Tyson, & Frazer, 2002; Hébert, 2002), particularly since Jacob K. Javits funding was earmarked for this purpose in the early 1990s (Institutes of Education Sciences [IES], n.d.;

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Saccuzzo, Johnson, & Guertin, 1994). Some theorists and researchers in the field hold differing views about the ways in which responses to this issue should be constructed and implemented (Ford, 2003; Kitano, 2003; Robinson, 2003). However, despite these ongoing, extensive efforts to attain more equitable representation of gifted students from diverse populations, poor and minority students remain underserved by gifted education programs proportional to their representation in the broader student population (Donovan & Cross, 2002; U.S. Department of Education, 1993).

Although school administrators, school psychologists, and parents typically play important roles in the identification process, it can be argued that teachers are the most firmly embedded in the day-to-day practice of education than are any other group (e.g., Brophy, 1986; Sanders & Rivers, 1996; Wright, Horn, & Sanders, 1997). Thus, a closer examination of how teachers understand giftedness and how their beliefs and expectations shape their classroom practices related to talent development is needed.

Background

Despite noted interindividual variation in behavioral, affective, and cognitive patterns (Hodge & Kemp, 2000), there is a cluster of characteristics commonly cited in descriptions of young children who go on to be identified as gifted. These include early language development and reading (Hodge & Kemp, 2000; Jackson, 2003; Sankar-DeLeeuw, 2004), strong verbal and visual memory (Harrison, 2004; Sankar-DeLeeuw, 2004), intense curiosity and interest in investigative problem solving (Hodge & Kemp, 2000; Rotigel, 2003), capacity for abstract thinking (Kitano, 1995; Walker, Hafenstein, & Crow-Enslow, 1999), and extended attention span (Damiani, 1997). Young gifted students have been described as active learners who seek to move beyond the familiar and make connections between the known and unknown (Harrison, 2004) and who seek to "know everything there is to know" (Rotigel, 2003, p. 210) about topics that engage their interest.

However, one possible factor contributing to the continued problem of underrepresentation of poor and minority students in gifted

programs is an inadequate understanding of the roots of the problem in the earliest years of schooling. Failure to identify and develop talent in very young children has been linked to subsequent negative outcomes in cognitive, academic, social, and affective development (Neihart, Reis, Robinson, & Moon, 2002). Despite this link, the literature highlights the reluctance of educators to formally identify talent in the early years of schooling, stemming from the belief that very young students should not be "labeled" or "pushed" to perform academically (Sankar-DeLeeuw, 1999). The ramifications of inadequate early intervention for talent development are likely to be most severe for students from poor and cultural minority backgrounds. High potential in these students is often masked in the primary years by a lack of school readiness following inequitable preschool and early home experiences (Magnuson, Meyers, Ruhm, & Waldfogel, 2004).

Teachers' Beliefs About Giftedness in Young Students

Both teachers' conceptions of giftedness and their beliefs about the abilities of their students are areas of critical consideration related to identification and talent development practices in primary school classrooms. Teachers play a central role in the identification of young gifted students. Teachers are more embedded in the practice of gifted identification and talent development, especially at the primary school level where more formal instruments such as standardized testing are less likely to be employed (Gross, 1999). In this way, *whether* a primary grade student receives support to develop his or her talents, and *how* his or her talents are developed will depend in large measure on how that student's teacher conceptualizes giftedness in young children, including those from diverse backgrounds. However, few research studies have explored the beliefs primary teachers hold about giftedness. The following areas seem to be relevant to this investigation of teachers' beliefs.

Underidentification. In a survey study by Sankar-DeLeeuw (1999), only half of the participating primary teachers expressed the belief that children should be identified as gifted in the early years of school. While 32% agreed that gifted children require a different curriculum in the primary years, only 7% of teachers expressed support

for the early school entrance of gifted students. These findings are consistent with a trend toward later identification and formal intervention for gifted students, with students typically recognized in the third or fourth grade or the middle school years (Karnes & Johnson, 1989; Proctor, Black, & Feldhusen, 1988). Teachers might be motivated to avoid the misidentification of children at this level (Siegle & Powell, 2004), believing that children will be socially disadvantaged if removed or singled out from age peers (Gross, 1999).

Cultural Biases. Children from disadvantaged and culturally diverse backgrounds are placed at particular risk of being overlooked for gifted program placement because they are least likely to have out-of-school supports for talent development (Barclay & Benelli, 1994). In an effort to identify the degree to which teachers' race and student-teacher racial congruence influences teachers' ratings of children's academic expectations, Pigott and Cowen (2000) found that both African American and White teachers judged African American children to have less academic promise than White children. The trend to see White students in a more favorable light is consistent across other citations related to perceptions of academic competencies (e.g., Elhoweris, Mutua, Alsheikh, & Holloway, 2005), as well as perceptions of appropriate behavior and social adjustment (e.g., Sbarra & Pianta, 2001). In a recent meta-analysis, researchers found that teachers were much less likely to refer African American and Latino/a students for gifted programs than White students, with a difference of almost one full standard deviation (.92; Tenenbaum & Ruck, 2007).

Traditional Teacher Referral Instruments. In a study investigating teachers' biases when nominating students for gifted programs, Siegle and Powell's (2004) sample relied upon traditional, published checklists of "typical" behaviors associated with giftedness when determining students who should be identified for gifted programming. These authors found that general education teachers rated students (both gifted and nongifted) lower and recommended identification less frequently than gifted and talented specialists, and they attributed these differences to classroom teachers' predisposition to identify and remediate weaknesses and gifted specialists to build on strengths.

Survey responses from a national study by Brown and colleagues (2005) suggest that a majority of teachers believe in a multifaceted approach to uncovering talent in students and are in favor of expanding traditional views of giftedness. Teachers in the Brown et al. study supported a case study approach to talent identification, with a focus on the development of gifted behaviors and evidence of emerging student ability from a range of sources. McBride (1992) found that among those primary teachers who expressed support for the early identification of gifted students, there was great variability in the articulation of how they would support identification and talent development in their classrooms.

In conclusion, the picture painted by the literature suggests that while teachers express beliefs about the multidimensional nature of giftedness and the importance of supporting young gifted students, they may be unwilling or unsure of how to apply these beliefs in practice or may feel unable to do so in the context of broader school requirements. Further, their conscious or unconscious biases and assumptions may profoundly influence their beliefs and practices related to talent development in young children. According to Creswell (2007), when little is known about an area, one of the first steps is to attempt to describe the phenomenon so that subsequent research studies can be designed for in-depth investigation. Thus, because of the lack of full understanding of primary teachers' conceptions of talent, this descriptive study investigated teachers' reported beliefs concerning young gifted and potentially gifted children.

Methodology

This study was based on Phase I of a larger three-phase, triangulated, mixed-method study investigating primary teachers' conceptions of giftedness and their resulting classroom practices related to talent development. Specifically, this phase focused on the reported beliefs and attitudes primary teachers hold about the manifestation of gifted potential in primary age students.

Sampling Procedures

A disproportionate, stratified random sample of K–2 teachers (n = 6,062) from public schools that served a range of diverse students was drawn using metropolitan status and poverty level as stratification variables. Market Data Retrieval[1] (MDR) drew the sample and provided individual teachers' names and grade level, along with the associated school name and address. The teachers were provided with a self-addressed stamped envelope to return the survey. Respondents were assured that all responses were anonymous; researchers maintained tracking information only. A total of 434 teachers completed the survey (14% response rate). Due to the lack of available funding for extensive follow-up, a postcard was sent to all teachers in the sample, after which only a few additional surveys were returned. To investigate response bias, a wave analysis was done to determine if responses to questions changed from the first week to the last week of returned completed surveys. Results indicated that the pattern of responses was similar across respondents, regardless of the week in which the survey was returned. This suggests that late responders (similar to nonresponders) were similar to early responders, thus reducing the potential for response bias (Creswell, 2007).

Participants

Of the respondents, 39% taught in a suburban setting, 34% taught in a rural setting, and 28% taught in an urban setting. The responding teachers taught at schools with varying poverty levels: 23% worked in schools with 0–5.9% of students living below the poverty level, 32% with 6–15.9% of students below poverty, 26% with 16–29.9% of students below poverty, and 19% with 30% or more of the students living below the poverty level. Forty percent of the teachers reported that their schools identified gifted students in the primary grades; 36% of the schools offered programs for primary gifted learners.

Thirty-four percent of the teachers reported teaching kindergarten, 36% reported teaching first grade, and 30% reported teaching second grade. The majority of the teachers were female (98%) and White (91%). Teachers reported having an average of 9.1 years (SD = 8.4) teaching in the kindergarten classroom, 7.7 years (SD = 7.5)

teaching in the first-grade classroom, and 8.6 years (SD = 8.5) teaching in the second-grade classroom. Respondents also indicated that there were approximately two students in their classrooms eligible to receive special education services, three students who were English Language Learners (ELL), and two students who were formally identified as gifted.

The teachers had an average of 21.5 students in their class. The majority (90%) of the teachers held their teaching certification in elementary education. Forty-five percent of teachers held only a bachelor's degree, 40% held a master's degree, 13% held an educational specialist degree, and 2% reported holding a doctorate. Despite the low response rate, the respondents' demographics closely paralleled the full sample, thus reducing the threat of response bias (Babbie, 1990).

Instrumentation

The larger project involved a multidisciplinary review of the relevant literature of special, gifted, and preschool education; developmental, clinical, cognitive, educational, and neuropsychologies; social policy; child development; social science research; behavioral science; anthropology; and sociology to determine those attributes, principles, and recommendations for identifying talent in at-risk, disadvantaged, and culturally diverse young children. The general themes from these literatures informed the development of a survey designed to assess K–2 teachers' beliefs, attitudes, and practices in regard to young gifted (or potentially gifted) students from diverse backgrounds.

The survey for the larger study consists of six sections: Conceptions of Giftedness (teachers' beliefs about the meaning and manifestations of giftedness); Instructional Practices (classroom practices in general and as related to talent development); Identification of Talent (teachers' valuation of students characteristics when nominating students for placement in gifted programs); Student Readiness (teachers' beliefs about students' readiness); Demographics (educational and professional background and current classroom characteristics); and Case Studies (two different cases: one of a student manifesting typical gifted traits and one case of three profiles of students exhibiting

talent indicators that are either masked or overshadowed by poverty, dominant language, cultural traditions, health status, or other mitigating circumstances). The survey items in Sections 1–5 use a Likert-type scale; in the sixth open-ended section, teachers are asked to recommend educational adjustments for a student, given particular characteristics, and to provide their rationale for the adjustments they suggest. Vignettes or short profiles of potentially gifted students have been used previously in the field to gain insights into teachers' beliefs about identifying gifted students (Elhoweris et al., 2005; Siegle & Powell, 2004); however, these other instruments asked respondents to respond using a Likert-type scale. The open-ended section of the instrument used for the present study elicited teachers' comprehensive responses rather than specifically leading them to options suggesting gifted services. This open-ended approach is more appealing in that it allows participants to respond in their own words, it can provide rich descriptions of their responses, and it can capture more diversity in their thoughts and feelings on the topic (Erickson & Kaplan, 2000; Jackson & Trochim, 2002).

The survey was piloted with 12 K–2 teachers from a local school district who were not part of the study sample. They were asked to respond to the survey and to note any items that were confusing or misleading. Minor changes were made to the survey as a result of their feedback.

To explore whether the survey items reflected the specific dimensions contained in the survey, the data were subjected to an exploratory principle component analysis with varimax rotation. An examination of the scree plot indicated that the first seven factors should be included. Further examination of the data revealed that the first seven factors accounted for 32% of the variance, while the subsequent factors added only slight increases in the percentage of accounted variance. The seven factors had eigenvalues exceeding 3.50 at an alpha level of 0.05. Items that had a loading of .40 or greater were retained in the factors. The seven-factor solution appeared most interpretable in defining the dimensions within the survey. Therefore, the varimax-rotated seven-factor solution was regarded as an adequate representation of the data provided by this sample of primary grade teachers.

Data Analysis

Due to the descriptive nature of the study, the quantitative data obtained from the survey were analyzed using only descriptive statistics. Where appropriate, frequencies and percentages, as well as means and standard deviations for survey items, were calculated by grade level. However, due to similar patterns within each grade level, the data were collapsed across grade levels.

As is typical for open-ended surveys, some responses were more sparse, using lists of words or phrases; other respondents expressed their responses narratively in a more thorough verbal manner. Using methods described by Carley (1993) and Ryan and Bernard (2000), data were analyzed inductively using cognitive maps. This approach is noted to be particularly promising for use with open-ended survey responses because it combines two types of analytical procedures: (a) analysis of word lists and (b) the creation of visual representations of pertinent concepts showing causation and relations between elements and allowing for human interpretation. In this study, open-ended responses were coded by hand, generating a comprehensive list of novel themes. The frequency with which these themes occurred were calculated. The most common patterns and recurrent themes were noted and identified. This process was first conducted at the individual level, then grouped within each grade level, and finally grouped within the grade level by metropolitan type and school socioeconomic strata. It was then possible to note which specific themes occurred more frequently in one subgroup (e.g., rural, first-grade teachers more frequently identified student weaknesses) and at grade level (e.g., more frequent suggestion of gifted identification at second grade than Kindergarten or first grade). Researchers read and analyzed one student's case at a time, coding responses to "Brian" (dominant culture student exhibiting typical gifted characteristics) first and then coding each of the three other profiles (three diverse learners—"Alexis," a student from urban poverty, "Cory," a student with attention/learning processing difficulties or socioemotional issues, and "Maria," a student with limited English proficiency) who each demonstrated the talent indicators noted in the literature. A matrix was created that outlined key themes across grade-level responses to the varied case studies. Following the grade-level analy-

ses, cross-grade analyses were conducted that collapsed codes into encompassing themes. At this stage of analysis, researchers created a cognitive map that visually represented the most prominent themes and conditions that accompanied each theme. In the findings, each general theme was explicated and supported with specific quotes from teachers' responses.[2] To cite specific sources, responses were coded by giving each respondent an identification number within the state that the respondent was in.

Results

Survey Trends

This article is reporting on only one component (Phase I) of the larger study, that of teachers' reported beliefs as they relate to young gifted and potentially gifted children.

When asked about conceptions of giftedness, teachers generally reported that they could more easily see positive characteristics associated with gifted behaviors than negative characteristics (see Table 1). For example, when asked if they could imagine a gifted student who "transfers learning into other subjects or real-life situations" (with 5 equal to *very easy to imagine* and 1 equaling *cannot imagine*), 72% of teachers reported that this was very easy to imagine ($M = 3.7$, $SD = .50$). Alternatively, when asked if they could imagine a gifted student who "is not curious," 48% said this was difficult to imagine, while 36% reported that they could not imagine a gifted student not being curious ($M = 1.82$, $SD = .76$). These textbook characteristics illustrate that teachers often have preconceived notions about the characteristics of gifted students that are heavily skewed toward more positive characteristics. In fact, the three highest mean scores for questions focusing on conceptions of giftedness were overwhelmingly positive ("transfers learning into other subjects or real-life situations," $M = 3.7$; "tries to understand the how and whys of things," $M = 3.68$; and "has a large store of general knowledge," $M = 3.64$), while the three lowest means can be qualified as negative ("is not curious,"

M = 1.82; "has a limited vocabulary," *M* = 2.11; and "has difficult with reasoning skills," *M* = 2.28).

Any exceptions to this general rule involved the social and emotional needs of gifted students. In general, teachers seemed more willing to imagine that gifted students had more social and emotional issues. For example, when asked if they could imagine gifted students having "poor social skills," 34% of respondents indicated that this was very easy to imagine, while 49% saw this as easy to imagine (*M* = 3.15, *SD* = .75). In addition, teachers were in general agreement that gifted students can "be shy" (*M* = 3.11, *SD* = .69), and can "misbehave in school" (*M* = 3.13, *SD* = .75). However, even more overwhelming were teachers' responses to believing gifted students could have "a high social intelligence resulting in a strong connection to their community" (*M* = 3.36, *SD* = .64).

Table 2 focuses on stereotypical signs of giftedness from the literature and what characteristics teachers believe contribute to students being recognized as gifted at the primary level. Teachers, in general, believed that the most important factors contributing to students being recognized as gifted come from exposure to stimulating events at home or from their parents. The three highest means were "they have lots of books at home" (*M* = 4.16, *SD* = .76), "they have lots of experience from family trips" (*M* = 4.06, *SD* = .71), and "their parents worked with them at home" (*M* = 3.98, *SD* = .80). Teachers tended to favor the experiential context influence on recognizable signs of giftedness as opposed to the more foundational/textbook signs of giftedness such as "they come from two-parent homes" (*M* = 3.24, *SD* = .83), "they are the only children in the home" (*M* = 3.21, *SD* = .76), and "their parents' first language is English" (*M* = 3.31, *SD* = .81). The response with the lowest mean was that "the students attended day care" (*M* = 3.18, *SD* = .70), which would seem to fall under the experiential context. However, the mean for this response is likely low due to the teachers' perceptions that the students are getting enough stimulation and exposure from their parents and home life such that day care does little to supplement this.

When asked about various groups in which giftedness could be found, the highest mean response was associated with "The potential for academic giftedness is present in equal proportions in all racial/cultural/ethnic groups in our society" (*M* = 4.08, *SD* = .88).

Table 1

Teachers' Reported Conceptions of Giftedness

How easily can you imagine a gifted primary student who . . .	Very Easy to Imagine	Easy to Imagine	Difficult to Imagine	Cannot Imagine	Mean (*SD*)
transfers learning into other subjects or real-life situations?	72%	26%	2%	0%	3.70 (.50)
tries to understand the how and whys of things?	70%	29%	1%	0%	3.68 (.50)
has a large store of general knowledge?	67%	31%	2%	0%	3.64 (.54)
has an active imagination (i.e., generates many writing and story ideas, makes up original games, etc.)?	63%	35%	1%	0%	3.62 (.51)
likes to make three-dimensional structures from blocks and other manipulatives?	51%	47%	3%	0%	3.54 (.58)
completes assignments faster than same-age peers?	58%	38%	4%	0%	3.54 (.58)
can devise or adapt strategies to solve problems?	54%	45%	1%	0%	3.52 (.53)
can carry on a meaningful conversation with an adult?	52%	45%	3%	0%	3.5 (.55)
has unusual interests for their age (e.g., a first grader who is interested in walled cities or studying the weather)?	56%	38%	5%	1%	3.48 (.64)
can successfully carry out multiple verbal instructions?	51%	44%	5%	0%	3.46 (.60)
Demands a reason for things?	45%	50%	5%	0%	3.41 (.58)
has a sense of timing in language and gestures (i.e., dramatic flair)?	47%	47%	7%	0%	3.40 (.61)
works hard?	45%	49%	6%	0%	3.39 (.60)
has a high social intelligence resulting in a strong connection to their community?	44%	48%	7%	1%	3.36 (.64)
pays attention to detail?	43%	50%	7%	1%	3.35 (.63)
demonstrates leadership skills in one or more areas?	42%	52%	6%	0%	3.35 (.60)
dislikes drill and practice?	45%	45%	9%	0%	3.34 (.67)
is bilingual?	33%	56%	9%	3%	3.18 (.70)
makes people laugh with clever jokes?	28%	61%	11%	0%	3.17 (.60)
has poor social skills?	34%	49%	15%	2%	3.15 (.75)
misbehaves in school?	32%	52%	13%	3%	3.13 (.75)

How easily can you imagine a gifted primary student who . . .	Very Easy to Imagine	Easy to Imagine	Difficult to Imagine	Cannot Imagine	Mean (*SD*)
is shy?	28%	56%	14%	2%	3.11 (.69)
adapts readily to new situations and changes?	26%	56%	18%	1%	3.07 (.69)
is unusually sensitive to others' feelings?	21%	61%	18%	0%	3.03 (.63)
is able to overcome obstacles resulting from difficulties at home?	22%	54%	23%	2%	2.95 (.72)
does NOT seem interested in school?	30%	40%	21%	9%	2.90 (.93)
has an average achievement or aptitude test score?	19%	54%	25%	3%	2.89 (.73)
often does NOT bring in homework?	25%	45%	24%	7%	2.88 (.86)
has immature fine motor development?	21%	51%	23%	5%	2.87 (.80)
has a short attention span?	21%	50%	23%	6%	2.87 (.81)
has skill deficits in one or more academic areas (such as in math, science, etc.)?	17%	51%	26%	6%	2.79 (.80)
uses nonstandard English?	17%	43%	32%	9%	2.69 (.86)
is unmotivated?	18%	42%	32%	8%	2.68 (.86)
has weak spatial skills (such as sense of direction, figuring out how things work, poor with shapes and construction, etc.)?	12%	37%	43%	8%	2.54 (.81)
is a "follower" (seldom takes the lead and usually does what the other students are doing)?	9%	40%	44%	7%	2.51 (.76)
CANNOT work independently?	11%	32%	43%	14%	2.38 (.86)
does NOT read early or have strong early reading skills?	10%	31%	45%	15%	2.37 (.85)
learns at a slow pace?	10%	26%	52%	12%	2.35 (.82)
is NOT creative?	9%	29%	48%	15%	2.31 (.83)
has difficulty with reasoning skills (such as seeing connections between ideas, solving problems without help)?	8%	26%	53%	14%	2.28 (.79)
has a limited vocabulary?	6%	19%	54%	21%	2.11 (.80)
is not curious?	3%	12%	48%	36%	1.82 (.76)

Table 2

Recognizable Signs of Giftedness

Primary age students are more likely to be recognized as gifted if . . .	Strongly Agree	Agree	Disagree	Strongly Disagree	Undecided	Mean (*SD*)
they have lots of books at home.	35%	46%	15%	2%	2%	4.16 (.76)
they have lots of experience from family trips.	26%	52%	17%	2%	3%	4.06 (.71)
their parents worked with them at home (e.g. taught them reading skills, drilled them on numbers, provided computer games that are meant to "jump start" their skills).	25%	50%	20%	4%	1%	3.98 (.80)
they have siblings who are strong students.	13%	47%	32%	6%	2%	3.70 (.77)
their parents' first language is English.	8%	27%	48%	13%	4%	3.31 (.81)
they come from two-parent homes.	7%	27%	47%	18%	5%	3.24 (.83)
they are the only children in the home.	5%	23%	52%	14%	6%	3.21 (.76)
they attended day care.	4%	19%	56%	11%	9%	3.18 (.70)

Additionally, 78% of responses strongly agreed or agreed with the statement, indicating that the wide majority of teachers believed that all students posses the potential for giftedness in equal proportions. Additionally, the items with the two lowest means concerned differences among how boys and girls learn. Both "boys are more likely to show their giftedness through activities that tap spatial ability" (M = 3.54, SD = .69), and "girls are more likely to show their giftedness through activities that tap verbal ability" (M = 3.59, SD = .69) suggest that primary teachers agree less on the extent to which gender differences affect the ways that giftedness is manifested. Taken together, these results suggest that teachers are more likely to believe that giftedness is manifested differently among different cultural, racial, or ethnic groups than across gender. One interesting finding was that 27% of respondents disagreed that "the potential for academic gift-

Table 3

Primary Teachers' Beliefs About the Presence of Giftedness Across Groups

	Strongly Agree	Agree	Disagree	Strongly Disagree	Undecided	Mean (*SD*)
The potential for academic giftedness is present in all racial/cultural/ethnic groups in our society.	37%	41%	16%	6%	2%	4.08 (.89)
Giftedness manifests itself differently in different cultural/racial/ethnic groups.	21%	53%	21%	5%	5%	3.91 (.78)
Giftedness manifests itself differently in different socioeconomic groups.	19%	56%	22%	4%	5%	3.90 (.74)
The potential for academic giftedness is present in all socioeconomic groups in our society.	29%	36%	27%	9%	1%	3.85 (.93)
Girls are more likely to show their giftedness through activities that tap verbal ability.	8%	47%	42%	4%	7%	3.59 (.69)
Boys are more likely to show their giftedness through activities that tap spatial ability.	7%	45%	44%	4%	9%	3.54 (.69)

edness is present in all socioeconomic groups in our society." Thus, a quarter of the primary teachers responding felt as though socioeconomic status (SES) was a major determinant in possessing some kind of academic giftedness (see Table 3).

Teachers were asked how likely they would be to identify a student as gifted if the student acted in given way or had particular characteristics (see Table 4). In general, teacher responses tended to tap into more traditional views of gifted behaviors and characteristics. Questions with the higher means included "learns easily and quickly" (M = 2.79, SD = .60); "has an advanced vocabulary for age" (M = 2.83, SD = .39); "is highly imaginative" (M = 2.82, SD = .40); "offers unusual, unique, clever responses to questions and problems" (M = 2.89, SD = .35); "has a large amount of general information" (M =

2.64, *SD* = .52); "enjoys playing with words" (*M* = 2.67, *SD* = .52); "uses details in stories and pictures" (*M* = 2.7, *SD* = .51); and "is able to see cause and effect relationships" (*M* = 2.73, *SD* = .47). On the other hand, teachers were generally less apt to consider identifying a gifted student who: "is well liked by classmates" (*M* = 1.84, *SD* = .66); "makes other students laugh" (*M* = 1.81, *S* = .66); "gives unexpected, sometimes 'smart-aleck' answers" (*M* = 1.92, *SD* = .71); "has a lot of energy, may have difficulty remaining in seat" (*M* = 1.94, *SD* = .63); "has difficulty moving on to another topic" (*M* = 1.91, *SD* = .66); and "likes to work in small groups" (*M* = 1.8, *SD* = .63).

In addition to these broad trends, several other responses were worth noting. For example, teachers had a more difficult time seeing students who "give unexpected, sometimes 'smart-aleck' answers" (*M* = 1.92, *SD* = .71); "have a lot of energy, may have difficulty remaining in seat" (*M* = 1.94, *SD* = .63); and "have difficulty moving on to another topic" (*M* = 1.91, *SD* = .66) as being less likely to be identified as gifted and/or talented. There is often a negative stigma associated with students who possess these characteristics and it seems as though teachers have a more difficult time envisioning identifying a student as gifted who disrupts class and interferes with classroom control and management.

When primary teachers were asked about the importance of particular factors upon entering school, the two highest factors reported by teachers were "social and personal development" (*M* = 2.72, *SD* = .47) and "language and literacy skills" (*M* = 2.60, *SD* = .57), indicating that teachers perceived students as needing to behave in a school setting and also to come in with a foundation of literacy and language development. On the other hand, "mathematical thinking" (*M* = 2.36, *SD* = .65) and "scientific thinking" (*M* = 2.28, *SD* = .61) were the two areas of least importance to teachers (see Table 5). Thus, it appears that teachers were more concerned about students entering school with the skills to function in a school setting rather than any mathematical or scientific skills. This possibly reflects the idea that teachers more highly value basic abilities to function in a class rather than those that may indicate advanced abilities.

Table 5

Importance of Factors When Entering School

	Very Important	Somewhat Important	Not Important	Mean (*SD*)
Social and Personal Development (e.g., follows classroom rules, takes turns, pays attention, is not disruptive, finishes tasks, works cooperatively)	72%	27%	1%	2.72 (.47)
Language & Literacy (e.g., uses letters to depict words, identifies letters in the alphabet, has a basic understanding of phonetic principles, recognizes common sight words, listens for meaning in discussions)	65%	31%	4%	2.60 (.57)
Physical Development (e.g., has well-developed gross and fine motor skills; performs self-care tasks competently; is physically healthy, rested, and well nourished; cuts with scissors; uses pencils and paint brushes)	54%	43%	3%	2.50 (.57)
Mathematical Thinking (e.g., recognizes patterns and duplicates them, can count to 20 or more, understands the concept of number and quantity, can perform simple addition and subtraction, can tell time to the hour)	45%	46%	9%	2.36 (.65)
Scientific Thinking (e.g., uses senses to observe characteristics of living and non-living things, makes comparisons between objects, seeks answers to questions through active investigation)	36%	56%	8%	2.28 (.61)

Summary of Findings: Open-Ended Case Studies

Case 1: Brian. Brian was a dominant culture student exhibiting stereotypical gifted characteristics. It is clear from the teachers' perspectives that he needed a great deal of challenge in school, challenge that far exceeded the current curriculum. Respondents clearly viewed him as a gifted individual. One respondent wrote, "I think all of Brian's characteristics and abilities show that he needs to be in an advanced/gifted class" (133SC). In order to meet Brian's educational needs, teachers primarily suggested challenging curriculum, advanced

assignments, and modification in home reading and homework, with a specific emphasis on reading and language challenge. One respondent recommended that teachers should ". . . challenge Brian as much as possible to bring him as far as he can go" (3SA). Another teacher wrote, "It is important that he is challenged so that he doesn't become bored and can achieve his highest potential" (117RC). Journaling activities, creative writing exercises, and book writing also were suggested as ways to increase challenge for Brian allowing him to work at his "ability level." One teacher explained, "I feel that Brian should be provided with opportunities to do extra projects, such as writing and publishing some of his stories into books and then sharing them with other classes" (102RD).

Respondents seemed to have no doubt as to his high level of giftedness, evidenced by his actions in the classroom (creativity, inquisitive nature, sense of humor, high academic ability). A teacher explained, "Testing theories, asking questions and trying to figure out how things work again would probably show a tendency towards giftedness" (15RB). Another said, "I would first recommend Brian to be tested for our G/T program because of his intellectual abilities, his sense of humor, and his descriptive stories and words" (135SD). Many of the respondents did not question the idea that Brian was a perfect match for a school's gifted program. In fact, a recommendation for gifted programs and services was the most frequent suggestion from all grade levels and all subgroups. One teacher stated simply, "Brian is a gifted student who should be placed in a class with other gifted students to challenge his ideas" (49RB). Another respondent wrote, "I would recommend testing Brian for the gifted program. It appears that he has mastered the first grade curriculum and would benefit from the gifted class" (43RC).

Challenge was often seen as a way to alleviate boredom for Brian. One teacher stated, "I would give him more appropriate material to work on so he does not become bored. I really like to challenge my students" (92UB). Another explained, "He needs work that is going to challenge him—work that is on his grade level. If he does not get this he may become bored and have a behavior problem" (12UC).

Recommendations for gifted services for Brian (including acceleration options) were more prevalent in the mid-to-high SES respondent pools than those in low-SES respondent groups. Acceleration

to a higher grade level in reading and math was mentioned by some teachers. "Due to Brian's high reading level, I would put him in an appropriate reading group in another classroom," one teacher said (77RB). Another explained, "When the average kindergartners are napping, Brian should work in a second grade classroom to advance his reading, math and science skills with his intellectual peers (regular 2nd graders)" (32UD).

Rural respondents were more likely to suggest peer tutoring for Brian as an outlet to foster Brian's patience and social skills while helping struggling students. "I would let him peer tutor as much as possible—use him as a resource," one respondent wrote (89RD). Another stated, "By his helping other students he is learning a great gift of patience and getting along with people—a necessary skill for his future" (43RB).

Further emphasizing Brian's socialization, one teacher said, "He obviously gets great satisfaction from his peers and needs to interact with children his own age" (6SB). Another teacher pointed out, "How are his social skills? Can he work in a group? [Social skills are] far more important than gifted!" (70RA).

Special assignments in research, focusing on Brian's interest areas, were suggested as a way to serve his inquisitive nature. One respondent suggested, "Allowing individual research time will allow him to think on his own" (119UC). Hands-on projects, project design and implementation, and problem-solving and science activities were suggested by several teachers. A respondent explained, "He could have the opportunity to design and implement some type of project that requires him to explain how his project works and why. These projects could allow him to delve into how things work and he could answer his own curiosity" (111UD). A focus on advanced reading, advanced writing, writing contests, creative writing exercises, and publishing opportunities are stressed frequently as well. One respondent wrote, "Encourage him to enter available reading and writing opportunities and to 'publish' his work" (42RB).

Finally, a common element of responses from all groups was the inclusion of Internet research and computer programs for advanced work, including computer programs for math and writing, as well as WebQuests. These responses show the growing importance of including technology in the classroom to assist gifted learners.

Case 2: Cory. Cory was a student with attentional/learning processing difficulties and socioemotional issues but demonstrated several talent indicators noted in the literature. The recommendations that were most prevalent in the responses encouraged the use of hands-on activities for Cory, focusing on independent projects and exploration activities geared toward his interests, the development of his social skills, and counseling to manage his exhibited classroom behavior.

The use of hands-on activities and manipulatives in order to keep Cory occupied and interested during the school day was mentioned by several respondents. One teacher wrote, "He needs hands-on materials. Manipulatives seem to be what keeps his processes going" (53RC). Another teacher recommended the use of "more hands-on activities that he is free to go to when he has finished the most basic of things in the class; keep him busy with things that can lead to his own discovery of answers" (81SB).

Also, there was a high recognition of Cory's inclination toward science or exploration and independent work. Therefore, common suggestions included providing extra science activities or exploration opportunities in project-based settings. One teacher suggested, "It seems that Cory has a knack for hands-on projects that require him to create knowledge on his own and work through the experiment at his own pace. I would recommend that Cory be involved in more hands-on projects that require him to lead his own investigations, designed by the teacher with a specific overriding goal, but provides Cory with plenty of room to investigate and experiment and come to conclusions on his own" (17SA). Another teacher wrote, "I would find out if some of the lab supplies Cory is using could be brought into the kindergarten classroom for Cory to continue a project in the classroom with the aide" (101SA). One respondent recommended, "He needs to be challenged with in-depth project type activities" (111SB). A teacher also mentioned, "If his mother teaches physics, he probably has some good science genes—capitalize on that" (71RD).

A major concern of all respondent groups was peer and group socialization for Cory. One teacher recommended using "games, so he can learn to play with others" (86RD). Another teacher wrote, "He needs to spend less time in the physics lab and more time . . . learning thoughts and ideas about his own age learning. He is not

developed in his own age social skills because he spends too much time with older people!" (27SD).

Converse to the need for Cory to develop social skills was the recurring theme of capitalizing on his interests. To foster better behavior and spur his interest in classroom activities, teachers encouraged allowing him to work independently. One teacher wrote, "He seems to work well on his own, so possibly the teacher could find out his interests and let him have the time to pursue them" (66RD). Another teacher suggested, "He should also be able to pursue some of the interests he demonstrates" (7SA).

Respondent groups also showed some emphasis on the teacher using positive reinforcements or a token economy system in the classroom in order to modify and control Cory's behavior. One teacher recommended using "positive reinforcement geared to his interests (science, hands-on) for following rules" (58SB). Another teacher suggested using a "chip/sticker/token system for staying on task and/or attention" (40UC). One respondent suggested "encouraging Cory when he is staying on task and making good progress" (55UD).

Very few respondents recommended gifted testing for Cory. Rather than suggestions pertaining to giftedness, most respondents suggested classroom curricular changes instead. Some of these respondents even focused on creating an IEP for him (most frequent suburban response) or finding him a tutor (most frequent urban response). One teacher wrote, "Maybe he is bored with the level of instruction and needs more challenging activities" (71RD). Another wrote, "It sounds like Cory needs more challenging activities or work within his classroom. He is already six and may have been held out a year due to immaturity, but obviously he is bright" (131SA). Regarding gifted programming one teacher wrote, "See how he fares in third grade. If he is not challenged enough, recommend him for gifted class" (86RD). One teacher explained, "I would recommend that he applies for admittance to our gifted magnet. The fact that he can create his own projects and then work at them for hours is very convincing; however his resistance to leaving them unfinished is even more so!" (80UC).

Although gifted programming was not recommended often, support services for his deficits were the focus of most responses. One teacher wrote, "I would probably refer Cory to the student support

team for testing to see if he was attention deficit or emotionally behaviorally disturbed. He obviously is intelligent but probably is not very successful in the classroom because of his inability to focus" (75RC). In addition, many respondents recommended counseling services to deal with Cory's behavior. One teacher explained, "The Guidance Counselor could assist Cory with his emotional outbursts" (118SA). Another respondent wrote, "I'd first discuss Cory's behavior with his mother and the counselor" (143SC).

One respondent from each of the suburban and rural groups recommended that Cory be tested for ADHD/ADD. One teacher wrote, "Cory is probably ADD maybe even with HD. He might benefit from medication to aid in his concentration and attention in class. This kind of behavior also makes these children 'loners'" (102RB). Another stated, "Refer Cory for counseling if confrontational behavior disrupts [the] classroom" (77RD).

Case 3: Maria. Maria was described as a student who demonstrated both limited English proficiency and talent in science. All respondent groups seemed to focus primarily on two areas: (a) Maria's need for ELL support, and (b) Maria's high interest in science. There also were many respondents who mentioned parental support to increase Maria's use of English.

In regards to ESL recommendations, one teacher wrote, "I would suggest that the school's ESL teacher be asked to work with this child on a regular basis both individually and within the classroom. It is sometimes difficult for teachers who speak English to recognize what ESL students really understand and, therefore, may not realize they are gifted" (18RB). ESL services were suggested to assist Maria with classroom work, translations/understanding, and parental support. Another teacher recommended "ESL tutoring for 20 minutes per day," commenting, "If she can do what she's doing having to deal with two languages, mastery of English should let her reach her prime" (58SB). Another wrote, "Maria is demonstrating a very natural reading delay due to her acquisition of two languages. She would benefit from ESL support and additional reading support in English and Spanish, but, based on other strong skills will likely be on grade level in reading certainly before fourth grade" (75SC).

In light of Maria's high interest in science, teachers made recommendations to incorporate more science activities into the curriculum for Maria. One teacher wrote, "I would also allow her to complete any science 'project' she would like in lieu of regular homework" (121RB). Another respondent wrote, "In the classroom I would set reading, math and science areas with science interests a focus" (49SA) as a way to integrate curriculum. An urban teacher explained, "I would incorporate science in other subject areas. That way she can improve in other subject areas and hopefully become more excited in other subject areas" (20UB).

An overwhelming response by all respondents focusing on science integration and activities was the use of science-related reading materials to match Maria's reading level in order to create interest for reading improvement. Use of such materials was suggested in hopes of raising her reading proficiency by using personally motivating materials. One teacher explained, "To help Maria work up to grade level in reading, I would try to find appropriate level reading materials in science—using an area that she is interested in to help her gain the needed skills in reading. This may be more difficult because of limited reading materials for primary children on science topics" (56RD).

There was much less of a focus put on placing Maria in a gifted program than on capitalizing on her interests in class and trying to help her reading problems. One teacher stated, "Maria needs a teacher who understands gifted students (inclusion gifted is better than pull-out)" (54UC). Another teacher wrote, "She should be tested to see if she qualifies for the Gifted Program [since] she makes up fun games [and is] always trying to figure out 'why?', and she makes connections on her own" (2RB). However, far more often, instead of being considered for gifted programming, Maria was usually described as the student who was thought to need the extra assistance from others. Overall, respondents in all groups showed a greater focus on improving Maria's weaknesses and needs (e.g., reading improvement, ESL) through the use of materials and topics related to her interests. One teacher explained, "She shows gifted tendencies, however I would not refer her. Without testing procedures, her reading problems would hinder her. Since she couldn't be retested for two years,

I'd give her another year to adjust and recommend testing in third grade" (27RD).

One rural teacher explained, "She should be placed in our Reading Recovery program. This would get her to grade level in reading and everything else would fall into place" (34RB). In order to increase her reading proficiency, another common theme in suburban and rural responses was to allow Maria opportunities to share information with peers. Class presentations were recommended as ways to improve her verbal communication. One teacher wrote, "Encourage Maria to share with other students information that she reads" (84RA).

Rural and suburban respondents had some recommendations for involvement of Maria's parents as well. This involvement could take the form of conferences, parent support for academics at home, or having the parents participate in the ESL program with Maria. One teacher wrote, "I would involve her parents as well by giving them many ideas and ways to help her reading skills develop" (28RC). Another respondent wrote, "Hopefully programs for ESL with her parents would benefit" (3SA). Low-SES suburban respondents more frequently recommended parental support at home to advance academics. One teacher wrote, "Her parents might want to attend her school and classroom to see what she was doing and learning. Establishing some communication with the parents would be good so everyone is helping Maria. She could be teaching her parents English!" (152SC).

Case 4: Alexis. Recommendations for Alexis, a talented student from urban poverty, remained relatively consistent across respondent groups of teachers, grades K–2 as well as across all subgroups.

Teachers emphasized the importance of mentorships to aid Alexis emotionally and academically. Responses indicated that a mentor could be beneficial for Alexis, not only to help her complete her homework, but to act as a steady role model and support system. "I think Alexis should be allowed to have a high school or peer mentor after school that can give her time and quiet she needs to do her work well" (91RB).

Respondents also emphasized support systems for Alexis. Counseling and assistance from family support services weighed

heavily in the responses proposed to benefit Alexis. Rural respondents were the most likely to emphasize the use of afterschool or summer programs for Alexis as well as a guidance counselor or a guidance group to assist her. A suburban respondent suggested "counseling to deal with multiple foster homes" (118SA). Another respondent recommended "counseling to provide some type of support for her family environment" (49UD). Both rural and urban respondents requested that the school intervene with social services or the foster family in order to try and improve Alexis' home-life situation. One respondent wrote, "In school, the counselor should be involved with independent and group counseling. Also counseling outside school dealing with social skills would be helpful" (137RB). All respondent groups placed a large focus on Alexis' problem with completing homework. Suggested solutions included allowing Alexis time to complete homework in a quiet environment during class, to complete homework in a structured time after school, or to demonstrate mastery of the curriculum without completing homework at all. One teacher recommended the use of a "tutor to help her complete her homework" or assigning "homework that she can complete without assistance" (117RC). Another teacher suggested "giving her time to work on her assignments during literacy centers . . ." (105RB). Teachers also recommended strategies to encourage Alexis to complete homework more regularly. "I would set up an incentive program for her to turn in her homework and work on extra assignments" (96UD).

Several respondents mentioned Alexis' problems with language usage as well. Grammar and spelling skills were pointed out as lacking and in need of remediation. "It is clear that she demonstrates skills, but some of her basic skills are not developed. I would recommend her for any tutorial programs at our school" (96UD). Another teacher explained, "I would have mini-conferences with her about her grammar/punctuation problems with her writing. Then I would see if she could correct her mistakes" (65UC).

Respondents suggested increasing Alexis' time with books by allowing her to take books home from school, increasing her library time, encouraging her to write in a personal journal, or creating a book-making center for her to use. One teacher mentioned, "It would be important to set up a room library and provide the child with the opportunity to use books from the library. If the child completes her

work before others, perhaps she could work at the library center or even complete homework assignments" (107UD).

Very few suggestions for gifted testing or services for Alexis were made, and this option was far overshadowed by recommendations for homework help, literacy exposure, and mentorship participation. Another obvious pattern within these responses was that Alexis was able to thrive within difficult conditions. Some respondents recognized this resilience characteristic as indicative of giftedness. One teacher wrote, "She shows great initiative despite her horrible life. She should be tested, and if gifted, be given an IEP to attain her goals" (14SA). Another said, "If there are programs available at school for the gifted, see if she can be included" (57RA). Perhaps most often in the case of Alexis, respondents seemed far more apt to encourage remediation, counseling, and fulfillment of homework obligations for Alexis before recommending her for gifted programs and services.

Discussion and Implications

Three areas emerged from the data focusing on teachers' beliefs about giftedness, their perceptions of manifestations of talent, and the beliefs about underserved students. All of the areas have implications for identification of talent in primary-age students in general and for students from underserved populations in particular.

Beliefs About the Meaning of Gifted and Talented

A major finding from this Phase I study strongly suggests that the vast majority of primary-grade teachers hold traditional conceptions of the constructs related to gifted and talented learners. Respondents seemed comfortable with the description of a gifted learner as possessing strong reasoning skills, a general storehouse of knowledge, and facility with language, including a strong vocabulary—characteristics strongly associated with children with rich preschool experiences. At the same time, respondents had more difficulty conceptualizing gifted students as those without strong early reading skills, including a limited vocabulary, those with the inability to work independently,

or those who lacked internal motivation and persistence—characteristics frequently used to describe children from impoverished family backgrounds. The findings related to the teachers' predispositions toward traditional conceptualization of giftedness were echoed in the case study responses when the dominant response suggested that "Brian," the student from the majority culture and a middle-class family, be referred for gifted services. The other students, "Alexis," "Cory," and "Maria," were more frequently offered resources for their deficits, such as counseling programs, mentorships, tutoring, in-class instructional modifications, referral to school-based services, or suggestions for medications to ameliorate attention deficit or impulse control issues.

Perceptions About the Manifestation of Talent

Surveyed teachers quickly assigned value to students who possess strong work habits, effective verbal skills, and the ability to read. These observable behaviors were equated to either strong parent/home support or innate ability. The items on the survey that most strongly resonated with respondents as observable characteristics of giftedness aligned with traditional conceptions and included items such as "has a large storehouse of general knowledge," "can successfully carry out multiple verbal instructions," and "works hard."

However, the majority of respondents seemed unable to consider as gifted students who deviate from textbook indicators of giftedness. These pervasive beliefs seem to most significantly disadvantage students from poverty and those students whose first language is not English. For example, 75% of survey respondents found it *difficult to imagine* or *could not imagine* a gifted student as one with a limited vocabulary; the two most recognizable signs of giftedness that participants noted were that primary-age students would be more likely recognized as gifted if they had "lots of books in the home" and had "lots of experience from family trips," both proxies for higher socioeconomic conditions. Further, greater than one third of the participants indicated that the potential for academic giftedness is not present in all socioeconomic groups in our society, a belief that seriously disadvantages young students in poverty from being considered for gifted programs and services. This idea is consistent with their beliefs that

gifted children possess large amounts of general information about topics of interest. Taken together, these findings suggest that teachers believe that some degree of wealth is a necessary condition in order for academic giftedness to be manifested and recognized.

General Beliefs About Underserved Students

By and large, the teachers hold a deficit-oriented framework when considering the characteristics of the primary-grade learner. For example, the case study scenarios reveal overwhelming responses to students' negative characteristics and suggest remediation for these deficits before suggesting any enrichment, acceleration, or other gifted intervention strategies for their evident strengths. For example, a common response to address Cory's needs included sentiments similar to the following:

> He needs to spend less time in the physics lab and more time with the learning thoughts and ideas about his own age learning. He is not developed in his own age social skills because he spends too much time with older people. (27SD)

Teachers seemed to believe that gifted services were most appropriate for students who demonstrated all the traditional signals of giftedness and had no observable deficits; they did not seem to equate gifted program membership with students who had some observable talent indicators as well as other contextual circumstances. Survey responses seem to suggest that students must first overcome their deficit before being considered for gifted program benefits.

The findings from this phase of the study strongly suggest that a reconceptualization of talented primary-age students among primary educators must be considered if the field is to begin to address the issue of underrepresentation of cultural and economically disadvantaged students in gifted and talented programs. Toward this end, the following recommendations are offered.

As this study has chronicled, teachers in the first decade of the 21st century still hold traditional beliefs about what it means to be gifted and talented in the earliest years of public education, and, as a result, what their appropriate educational responses might or should be. Despite several decades of evolving understanding about the issue

of underrepresentation and dozens of targeted efforts to help teachers reconsider these views (including Jacob K. Javits funding earmarked for this purpose), the issue remains. The field of gifted education needs to continue to court and nurture their relations with general education, particularly at the often-overlooked primary grade level. With a general education partnership, gifted education may have the potential to help shape primary-grade teachers' experiences, beliefs, and, ultimately, their practices.

A second recommendation for updating teachers' internal beliefs about talent development in diverse primary children is to directly and overtly confront their misconceptions and outdated knowledge about the topic through high-quality, ongoing professional development. As noted in the change literature, research within the field of education expressly devoted to addressing educational change, it is a formidable challenge to modify deeply held belief structures, particularly when the beliefs are intertwined with politics and contemporary social policy (Conley & Goldman, 1995; McIntyre & Kyle, 2006; Zimmerman, 2006). The effects of professional development can be enhanced, however, by balancing opportunities for acquiring new information about talent with time and support for assimilation of this new information into the teachers' own classroom contexts (Zimmerman, 2006).

Limitations

As with any study, methodological limitations should be noted. First, the low response rate of the original sample warrants some concern. Although a follow-up postcard was sent in an attempt to get a higher response rate, as suggested by Babbie (1990), the contractual agreement with MDR prevented further contact with the sample drawn. Due to limited funding, it was not possible to resend a second round of surveys or provide a financial incentive with the original survey. It should be noted again that the response pool's demographics resembled that of the sample provided by MDR. Second, although the study respondents' demographics (e.g., gender, race) mimicked the original sample drawn, the majority of teachers reported being White. While this is reflective of contemporary U.S. classrooms, oversampling pro-

cedures might have increased the numbers of respondents identifying themselves as from diverse racial/ethnic groups.

References

Babbie, E. (1990). *Survey research methods*. Belmont, CA: Wadsworth.

Barclay, K., & Benelli, C. (1994). Are labels determining practice? Programming for preschool children. *Childhood Education, 70,* 133–136.

Brophy, J. (1986). Teacher influences on student achievement. *American Psychologist*, *41,* 1069–1077.

Brown, S. W., Renzulli, J. S., Gubbins, E. J., Siegle, D., Zhang, W., & Chen, C. (2005). Assumptions underlying the identification of gifted and talented students. *Gifted Child Quarterly, 49,* 68–79.

Carley, K. (1993). Coding choices for textual analysis: A comparison of content analysis and map analysis. In P. Marsden (Ed.), *Sociological methodology* (pp. 629–642). Oxford, UK: Blackwell.

Clark, B. (1997). Social ideologies and gifted education in today's schools. *Peabody Journal of Education, 72*(3), 81–100.

Conley, D. T., & Goldman, P. (1995). Reactions from the field to state restructuring legislation. *Educational Administration Quarterly, 31,* 512–538.

Creswell, J. (2007). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.). Boston: Allyn & Bacon.

Damiani, V. B. (1997). Young gifted children in research and practice: The need for early childhood programs. *Gifted Child Today, 20*(3), 18–23.

Donovan, M. S., & Cross, C. T. (Eds.). (2002). *Minority students in special and gifted education.* Washington, DC: National Academy Press.

Eby, J., & Smutny, J. F. (1990). *A thoughtful overview of gifted education*. New York: Longman.

Elhoweris, H., Mutua, K., Alsheikh, N., & Holloway, P. (2005). Effect of children's ethnicity on teachers' referral and recommen-

dation decisions in gifted and talented programs. *Remedial and Special Education, 26*(1), 25–31.

Erickson, P. I., & Kaplan, C. P. (2000). Maximizing qualitative responses about smoking in structured interviews. *Qualitative Health Research, 10,* 829–840.

Ford, D. Y. (2003). Two other wrongs don't make a right: Sacrificing the needs of diverse students does not solve gifted education's unresolved problems. *Journal for the Education of the Gifted, 26,* 283–291.

Ford, D. Y., & Harris, J. J., III. (1999). *Multicultural gifted education.* New York: Teachers College Press.

Ford, D. Y., Harris, J. J., Tyson, C. A., & Frazer, M. (2002). Beyond deficit thinking: Providing access for gifted African American students. *Roeper Review, 24,* 52–58.

Frazier, M. M., Garcia, J. H., & Passow, A. H. (1995). *A review of assessment issues in gifted education and their implications for identifying gifted minority students* (Research Monograph No. RM95204). Storrs: National Research Center on the Gifted and Talented, University of Connecticut.

Gross, M. U. M. (1999). Small poppies: Highly gifted children in the early years. *Roeper Review, 21,* 207–214.

Harrison, C. (2004). Giftedness in early childhood: The search for complexity and connection. *Roeper Review, 26,* 78–84.

Hébert, T. P. (2002). Educating gifted children from low socio-economic backgrounds: Creating visions of a hopeful future. *Exceptionality, 10*(2), 127–138

Hodge, K. A., & Kemp, C. R. (2000). Exploring the nature of giftedness in preschool children. *Journal for the Education of the Gifted, 24,* 46–73.

Institute of Education Sciences. (n.d.). *Jacob K. Javits Gifted and Talented Students education program.* Retrieved August 1, 2007, from http://www.ed.gov/programs/javits/index.html

Jackson, K. N., & Trochim, W. M. K. (2002). Concept mapping as an alternative approach for the analysis of open-ended survey responses. *Organizational Research Methods, 5,* 307–336.

Jackson, N. E. (2003). Young gifted children. In N. Colangelo & G. Davis (Eds.), *Handbook of gifted education* (3rd ed., pp. 470–482). Boston: Allyn & Bacon.

Karnes, M. B., & Johnson, L. J. (1989). Training for staff, parents, and volunteers working with gifted young children, especially those with disabilities and from low-income homes. *Young Children*, *44*(3), 49–56.

Karnes, M. B., & Johnson, L. J. (1991). The preschool/primary gifted child. *Journal for the Education of the Gifted, 14,* 267–283.

Kitano, M. K. (1995). Language diversity and giftedness: Working with gifted English language learners. *Journal for the Education of the Gifted, 18,* 234–254.

Kitano, M. K. (2003). Gifted potential and poverty: A call for extraordinary action. *Journal for the Education of the Gifted, 26,* 292–303.

Magnuson, K. A., Meyers, M. M., Ruhm, C. J., & Waldfogel, J. (2004). Inequality in preschool education and school readiness. *American Educational Research Journal, 41,* 115–157.

McBride, N. (1992). Early identification of the gifted and talented: Where do teachers stand? *Gifted Education International, 8*(1), 19–22.

McIntyre, E., & Kyle, D. W. (2006). The success and failure of one mandated reform for young children. *Teaching and Teacher Education, 22,* 1130–1144.

Neihart, M., Reis, S. M., Robinson, N. M., & Moon, S. M. (Eds.). (2002). *The social and emotional development of gifted children: What do we know?* Waco, TX: Prufrock Press.

Pigott, R. L., & Cowen, E. L. (2000). Teacher race, child race, racial congruence, and teacher ratings of children's school adjustment. *Journal of School Psychology, 38,* 177–196.

Proctor, T. B., Black, K. N., & Feldhusen, J. F. (1988). Early admission to elementary school: Barriers versus benefits. *Roeper Review, 11,* 85–87.

Robinson, N. M. (2003). Two wrongs do not make a right: Sacrificing the needs of gifted students does not solve society's unsolved problems. *Journal for the Education of the Gifted, 26,* 251–273.

Rotigel, J. V. (2003). Understanding the young gifted child: Guidelines for parents, families, and educators. *Early Childhood Education Journal, 30,* 209–214.

Ryan, G. W., & Bernard, H. R. (2000). Data management and analysis methods. In N. Denzin & Y. Lincoln (Eds.), *Handbook of*

qualitative research (2nd ed., pp. 769–802). Thousand Oaks, CA: Sage.

Saccuzzo, D. P., Johnson, N. E., & Guertin, T. L. (1994). *Identifying underrepresented disadvantaged gifted and talented children: A multifaceted approach* (Vols. 1 & 2). San Diego, CA: San Diego State University.

Sanders, W. L., & Rivers, J. C. (1996). *Cumulative and residual effects of teachers on future student academic achievement* (Research Progress Report). Knoxville: University of Tennessee Value-Added Research and Assessment Center.

Sankar-DeLeeuw, N. (1999). Gifted preschoolers: Parent and teacher views on identification, early admission, and programming. *Roeper Review, 21,* 174–179.

Sankar-DeLeeuw, N. (2004). Case studies of gifted kindergarten children: Profiles of promise. *Roeper Review, 26,* 192–207.

Sbarra, D. A., & Pianta, R. C. (2001). Teacher ratings of behavior among African American and Caucasian children during the first two years of school. *Psychology in the Schools, 38,* 229–238.

Siegle, D., & Powell, T. (2004). Exploring teacher biases when nominating students for gifted programs. *Gifted Child Quarterly, 48,* 21–29.

Tenenbaum, H. R., & Ruck, M. D. (2007). Are teachers' expectations different for racial minority than for European American students? A meta-analysis. *Journal of Educational Psychology, 99,* 253–273.

U. S. Department of Education. (1993). *National excellence: A case for developing America's talent.* Washington, DC: Office of Educational Research and Improvement.

Walker, B., Hafenstein, N. L., & Crow-Enslow, L. (1999). Meeting the needs of gifted learners in the early childhood classroom. *Young Children, 54*(1), 32–36.

Wright, S. P., Horn, S. P., & Sanders, W. L. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education*, *11,* 57–67.

Zimmerman, J. (2006). Why some teachers resist change and what principals can do about it. *NASSP Bulletin, 90,* 238–249.

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End Notes

1 Market Data Retrieval is a company that has mailing list databases that are the most comprehensive, complete, and accurate in the industry.

2 Given space limitations, this section is truncated; for a full copy of the study's findings, including matrices and cognitive maps, please contact the second author.